

ABSTRACT

**HUMANIZED ANTI-TAG-72 CC49 FOR DIAGNOSIS AND
THERAPY OF HUMAN TUMORS**

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The present disclosure provides humanized CC49 monoclonal antibodies that bind TAG-72 with high binding affinity and that are minimally immunogenic. In one embodiment, a humanized CC49 antibody includes a non-conservative amino acid substitution in a light chain complementarity determining region 3 of the CC49
10 antibody. In a further embodiment, the humanized CC49 antibody includes a non-conservative substitution of a first residue in a light chain complementarity determining region 3 and a substitution of a second residue in a complementarity determining region of the humanized CC49 antibody. In several of the embodiments, methods are disclosed for the use of a humanized CC49 antibody in the detection or treatment of a tumor in a
15 subject. Also disclosed is a kit including the humanized CC49 antibody described herein.